FACT SHEET

Permit Number: WA-002343-4
Public Notice start date: July 14, 2005
Public Notice expiration date: August 15, 2005
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The United States Environmental Protection Agency (EPA) Plans To Issue A National Pollutant Discharge Elimination System (NPDES) Permit To:

The Quinault Indian Nation
Taholah Wastewater Treatment Facility
114 Quinault Street
P.O. Box 189
Taholah, Washington 98587

EPA Proposes NPDES Permit Issuance.

EPA proposes to issue an NPDES permit to the Quinault Indian Nation, Taholah Wastewater Treatment Facility. The draft permit places conditions on the discharge of pollutants from the wastewater treatment plant to Quinault River. In order to ensure protection of water quality and human health, the permit places limits on the types and amounts of pollutants that can be discharged.

This Fact Sheet includes:

- information on public comment, public hearing, and appeal procedures
- a listing of proposed effluent limitations and other conditions
- a map and description of the discharge location
- detailed technical material supporting the conditions in the permit

The EPA Region 10 Proposes Certification.

EPA is certifying the NPDES permit for the Quinault Indian Nation, under section 401 of the Clean Water Act.

Public Comment.

Persons wishing to comment on or request a Public Hearing for the draft permit may do so in writing by the expiration date of the Public Notice. A request for a Public Hearing must state the nature of the issues to be raised as well as the requester's name, address and telephone number. All comments and requests for Public Hearings must be in writing and should be submitted to EPA as described in the Public Comments Section of the attached Public Notice.

After the Public Notice expires, and all comments have been considered, EPA's Director for the Office of Water will make a final decision regarding permit reissuance.

Persons wishing to comment on EPA Certification should submit written comments by the Public Notice expiration date to the U.S. Environmental Protection Agency, Region 10,1200 Sixth Avenue, OWW-130, Seattle, Washington 98101.

If no substantive comments are received, the tentative conditions in the draft permit will become final, and the permit will become effective upon issuance. If comments are received, EPA will address the comments and issue the permit. The permit will become effective 33 days after the issuance date, unless an appeal is submitted to Environmental Appeals Board within 33 days.

Documents are Available for Review.

The draft NPDES permit and related documents can be reviewed or obtained by visiting or contacting EPA's Regional Office in Seattle between 8:30 a.m. and 4:00 p.m., Monday through Friday (See address below). Draft permits, Fact Sheets, and other information can also be found by visiting the Region 10 website at www.epa.gov/r10earth/water.htm.

United States Environmental Protection Agency
Region 10
1200 Sixth Avenue, OWW-130
Seattle, Washington 98101
(206) 553-2108 or
1-800-424-4372 (within Alaska, Idaho, Oregon and Washington)

The Fact Sheet and draft permit are also available at:

The Quinault Indian Nation
1214 Aalis Drive
Taholah, Washington 98587

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I. APPLICANT

Quinault Indian Nation, Taholah Wastewater Treatment Facility

NPDES Permit No.: WA-002343-4

Facility Mailing Address:
114 Quinault Street, P.O. Box 189
Taholah, Washington 98587

II. FACILITY INFORMATION

A. Treatment Plant Description

The Quinault Indian Nation intends to construct, own, operate, and have maintenance responsibility for a facility that will treat domestic sewage from local residents and commercial establishments. The facility's application indicates that the design flow of the facility is 0.2 million gallons per day (mgd). Domestic wastewater will be treated through aerated lagoons with rapid infiltration basins. Effluent discharges from the rapid infiltration basins into the groundwater that has a hydrologic connection to the Quinault River.

All equipment will be in place by the time discharge commences in accordance with the permit application.

B. Background Information

The Quinault Indian Nation filed a NPDES Form 2A that was received by EPA on October 7, 2004.

A map has been included in Appendix A, which shows the location of the treatment plant and the discharge location.

III. RECEIVING WATER

A. Outfall Location/Receiving Water

The treated effluent from the Quinault Indian Nation Taholah Wastewater Treatment Facility will be discharged from Outfall 001, located at latitude 47° 20' 34" and longitude 124° 17' 00", to Rapid Infiltration Basins.

B. Water Quality Standards

The Quinault Indian Nation does not currently have its own water quality

standards. Until they establish their own regulations for water quality, Federal technology standards will be used.

IV. EFFLUENT LIMITATIONS

In general, the Clean Water Act requires that the effluent limits for a particular pollutant be the more stringent of either technology-based effluent limits or water quality-based limits. A technology based effluent limit requires a minimum level of treatment for municipal point sources based on currently available treatment technologies. A water quality based effluent limit is designed to ensure that the water quality standards of a waterbody are being met. For more information on deriving technology-based effluent limits and water quality-based effluent limits see Appendix B. The following summarizes the proposed effluent limitations that are in the draft permit.

1. The pH range shall be between 6.0 – 9.0 standard units.
2. Removal Requirements for Total Suspended Solids, TSS and five day Biochemical Oxygen Demand, BOD_5: For any month, the monthly average effluent TSS and BOD_5 load shall achieve a minimum 85% removal of the monthly average influent TSS andBOD_5 load.
3. Table 1, below, presents the proposed effluent limits for BOD_5 and total suspended solids (TSS). Monitoring requirements are proposed for: flow, *Escherichia coli* (E.coli) , pH, temperature, total ammonia and phosphorus, upstream flow, *Escherichia coli* (E.coli), temperature, pH, total ammonia and phosphorus.

Table 1: Effluent Limitations and Monitoring Requirements

Parameters	Average Monthly Limit	Average Weekly Limit	Maximum Daily Limit
BOD_5	30 mg/L (50 lbs/day)	45 mg/L (75 lbs/day)	---
TSS	30 mg/L (50 lbs/day)	45 mg/L (75 lbs/day)	---
Temperature	---	---	---
pH, standard units	6	9	---
E. coli (organisms/100 mL)	----	----	—

Total Phosphorus, mg/L	----	----	----
Total Ammonia as N, mg/L	----	----	----

The draft permit prohibits the discharge of waste streams that are not part of the normal operation of the facility, as reported in the permit application. The draft permit also requires that the discharge be free from floating suspended, or submerged matter in concentration that cause/may cause a nuisance.

VI. MONITORING REQUIREMENTS

Section 308 of the Clean Water Act and federal regulation 40 CFR 122.44(i) require monitoring in permits to determine compliance with effluent limitations. Monitoring may also be required to gather data for future effluent limitations or to monitor effluent impacts on receiving water quality. The Permittee is responsible for conducting the monitoring and for reporting results on Discharge Monitoring Reports (DMRs) to EPA and the Quinault Indian Nation.

Table 2 presents the proposed effluent monitoring requirements.

TABLE 2: Quinault Indian Nation, Taholah Wastewater Treatment Plant Monitoring Requirements

Parameter	Sample Location	Sample Frequency	Sample Type
Flow, mgd	Influent	Continuous	Recording
$BOD_{5,}$ mg/L	Influent and Effluent	1/week	grab
TSS, mg/L	Influent and Effluent	1/week	grab
pH, standard units	Effluent	1/week	grab
Temperature	Effluent	5/month	grab
E. Coli, organisms/100 mL	Effluent	5/month	grab
Total Ammonia as N, mg/L	Effluent	1/month	grab
Total Phosphorus, mg/L	Effluent	1/month	grab

VI. OTHER PERMIT CONDITIONS

A. Upstream Ambient Monitoring

The permittee shall also measure flow, temperature, pH, E. coli, total ammonia and phosphorus in the Quinault River upstream of the Rapid Infiltration Basins on a quarterly basis for the duration of this permit.

B. Quality Assurance Plan

The federal regulation at 40 CFR 122.41(e) requires the Permittee to develop and submit a Quality Assurance Plan to ensure that the monitoring data submitted are accurate and to explain data anomalies if they occur. The Permittee is required to complete a Quality Assurance Plan within 120 days of the effective date of the final permit. The Quality Assurance Plan shall consist of standard operating procedures the Permittee must follow for collecting, handling, storing and shipping samples, laboratory analysis, and data reporting.

C. Additional Permit Provisions

Sections III and IV of the draft permit contain standard regulatory language that must be included in all NPDES permits. Because they are regulations, they cannot be challenged in the context of an NPDES permit action. The standard regulatory language covers requirements such as monitoring, recording, reporting requirements, compliance responsibilities, and other general requirements.

D. Operation and Maintenance Plan

Section 402 of the Clean Water Act and federal regulations 40 CFR 122.44(k)(2) and (3) authorize EPA to require best management practices, or BMPs, in NPDES permits. BMPs are measures for controlling the generation of pollutants and their release to waterways. For municipal facilities, these measures are typically included in the facility's Operation & Maintenance (O&M) plan. These measures are important tools for waste minimization and pollution prevention.

The draft permit requires the Quinault Indian Nation, Taholah Wastewater

Treatment Facility to incorporate appropriate BMPs into their O&M plan within 120 days of the effective date of the final permit. Specifically, the Indian Nation must consider spill prevention and control, optimization of chemical use, public education aimed at controlling the introduction of household hazardous materials to the sewer system, and water conservation. To the extent that any of these issues have already been addressed, the Indian Nation need only reference the appropriate document in its O&M plan. The O&M plan must be revised as new practices are developed.

As part of proper O&M, the draft permit requires the Indian Nation to develop a facility plan when the annual average flow exceeds 85 percent of the design flow of the plant (0.2 mgd). This plan requires the Indian Nation to develop a strategy for remaining in compliance with effluent limits in the permit.

VIII. OTHER LEGAL REQUIREMENTS

A. Endangered Species Act

The Endangered Species Act requires federal agencies to consult with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) if their actions could adversely affect any threatened or endangered species. See Appendix C for further details.

B. CWA and 401 Certification

Section 401 of the Clean Water Act requires EPA to certify water quality before issuing a final permit. Since the discharge is from a facility located within the boundaries of the Quinault Indian Reservation, the provisions of Section 401 of the Clean Water Act requiring state certification of the permit do not apply. EPA will certify in accordance with Section 401.

C. Permit Expiration

This permit will expire five years from the effective date of the permit.

APPENDIX A WASTEWATER TREATMENT PLANT LOCATION

APPENDIX B
BASIS OF EFFLUENT LIMITATIONS

The CWA requires Publicly Owned Treatment Works to meet performance-based requirements (also known as technology-based effluent limits) based on available wastewater treatment technology. EPA may find, by analyzing the effect of an effluent discharge on the receiving water, that technology-based effluent limits are not sufficiently stringent to meet water quality standards. In such cases, EPA is required to develop more stringent, water quality-based effluent limits designed to ensure that water quality standards are met. Therefore, this permit will require ambient monitoring upstream of the facility in the Quinault River to ascertain the health of the river and to gather more information for the next permit cycle. Water quality-based effluent limits may be developed for subsequent NPDES discharge permits should they be required. The following explains in more detail the derivation of technology-based effluent limits.

A. Technology-Based Effluent Limitations

EPA methodology and Federal regulations at (40 CFR § 122.45 (b) and 122.45 (f)) require BOD_5 and TSS limitations to be expressed as mass based limits using the design flow (0.2 mgd) of the facility. Mass based limits, in lbs/day, are typically derived by multiplying the design flow in mgd by the concentration limit in mg/l by a conversion factor of 8.34.

For example:

BOD_5 loading, monthly average = 30 mg/L X 0.2 mgd X 8.34 = 50 lbs/day

Therefore, the permit loading limits are proposed to be:

Parameter	Monthly Average	Weekly Average	Percent Removal
Biochemical Oxygen Demand (5-day) lbs/day	50	75	85
Total Suspended Solids			

lbs/day	50	75	85

B. Water Quality-Based Evaluation

1. Statutory Basis for Water Quality-Based Limits

The NPDES regulation (40 CFR 122.44(d)(1)) implementing section 301 (b)(1)(C) of the CWA requires that permits include limits for all pollutants or parameters which are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any water quality standard, including narrative criteria for water quality.

The regulations require that this evaluation be made using procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant in the effluent, species sensitivity (for toxicity), and where appropriate, dilution in the receiving water. The limits must be stringent enough to ensure that water quality standards are met, and must be consistent with any available wasteload allocation.

2. Reasonable Potential Determination

When evaluating the effluent to determine if water quality-based effluent limits are needed based on chemical specific numeric criteria, a projection of the receiving water concentration (downstream of where the effluent enters the receiving water) for each pollutant of concern is made. The chemical specific concentration of the effluent and ambient water and, if appropriate, the dilution available from the ambient water are factors used to project the receiving water concentration. If the projected concentration of the receiving water exceeds the numeric criterion for a specific chemical, then there is a reasonable potential that the discharge may cause or contribute to an excursion above the applicable water quality standard, and a water quality-based effluent limit is required.

As mentioned above, sometimes it is appropriate to allow a small area of ambient water to provide dilution of the effluent. These areas are called

mixing zones. Mixing zone allowances will increase the mass loading of the pollutant to the water body, and decrease treatment requirements. Mixing zones can be used only when there is adequate ambient flow volume and the ambient water is below the criteria necessary to protect designated uses.

3. Procedure for Deriving Water Quality-Based Effluent Limits

The first step in developing a water quality-based permit limit is to develop a wasteload allocation for the pollutant. A wasteload allocation is the concentration (or loading) of a pollutant that the Permittee may discharge without causing or contributing to an exceedance of water quality standards in the receiving water off the reservation.

Once the wasteload allocation has been developed, the EPA applies the statistical permit limit derivation approach described in Chapter 5 of the *Technical Support Document for Water Quality-Based Toxics Control* (EPA/505/2-90-001, March 1991, hereafter referred to as the TSD) to obtain monthly average, and weekly average or daily maximum permit limits. This approach takes into account effluent variability, sampling frequency, and water quality standards.

4. Water Quality-Based Effluent Limits

(a) **Toxic Substances**

This application will not be screened against the toxic substances found in the National Toxics Rule since the Quinault Indian Nation, Taholah Wastewater Treatment Plant will not be required to submit Expanded Effluent Testing Data or Toxicity Testing Data because of a treatment plant design flow less than 1.0 MGD.

(b) **E. coli Bacteria**

E. coli monitoring requirement five times a month has been added to protect public health and the environment

(c) **pH**

Minimum and maximum pH values have been included in the permit in the range of 6.0 and 9.0 standard units.

(d) **Dissolved Oxygen**

Discharges from the Quinault Indian Nation Taholah Wastewater Treatment Plant are not expected to have an appreciable effect on the dissolved oxygen concentration in the Quinault River.

However, BOD_5 limitations have been included in the permit to control the discharge of oxygen demanding constituents into the Quinault River.

(e) **Ammonia**

This facility is not expected to have concerns with ammonia. However, there is limited data as to how much ammonia is present in the river and from the discharge. Therefore, the proposed permit includes requirements for monitoring ammonia upstream, and in the effluent for the next five years.

(f) **Phosphorus**

This facility is not expected to have concerns with phosphorus. However, there is limited data as to how much phosphorus is present in the river and from the discharge. Therefore, the proposed permit includes requirements for monitoring phosphorus upstream and in the effluent for the next five years.

In all cases above consideration was given to the fact that after treatment through aerated lagoons, the discharge is to in ground rapid infiltration basins. The infiltration point is approximately 500 feet away from the Quinault River. The flow of the Quinault River is 352 cubic feet per second 7Q10 and the facility design is 0.2 million gallons per day. Considering treatment, technology limits, rapid infiltration basins, and the Quinault River flow; this discharge is not anticipated to have WQ impacts. The permit, however, requires monitoring to re-evaluate impacts during the next permit reissuance cycle including *E.coli* before and after the infiltration basins.

APPENDIX C

ENDANGERED SPECIES ACT and ESSENTIAL FISH HABITAT

Section 7 of the Endangered Species Act (ESA) requires federal agencies to request a consultation with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) regarding potential effects an action may have on listed threatened and endangered species. EPA was referred to the following website http://westernwashington.fws.gov/se/SE_List/GRAYSHAR.htm on March 7, 2005 by USFWS when requested lists of threatened and endangered species. The USFWS website identified Bald Eagles (*Haliaeetus leucocephalus*) and Bull Trout in Grays Harbor County near the Quinault River. In a phone call, on March 8, 2005, NMFS identified Coho and Chinook Salmon in the Quinault River.

The following factors have been identified as possibly influencing the recovery of the Bull trout, Coho and Chinook Salmon: the combined effects of habitat degradation, fragmentation and alterations associated with dewatering, required construction and maintenance, mining, grazing: the blockage of migratory corridors by dams or other diversion structures; poor water quality; incidental angler harvest; entrainment into diversion channels; and introduced non-native species.

Issuance of an NPDES permit for the Quinault Indian Nation Taholah Wastewater Treatment Plant will not result in habitat destruction, nor will it result in significant changes in population that could result in increased habitat destruction for any threatened or endangered species that may occur in the vicinity of the discharge. The EPA has tentatively determined that issuance of the NPDES permit is **not likely to adversely effect** the Bald eagle, Bull trout, or the Coho and Chinook salmon.